June '00 **Volume 4.1**

Ops Brief

THE DO'S CORNER

The recent DOD/IG inspection reported that some of our in-service aircraft did not have current annual and/or other inspections. All pilot's should be aware that they are responsible to ensure that the annual and other applicable inspections are current for any aircraft that they fly (FAR 91.3 and 91.409(a)) and ensuring that all inspections have been properly entered into the logbooks.

As usual, there's a lot going on in Operations right now, and there are many good things to report. Read on and see what's been happening, and keep up the good work.

Glen Atwell
Director of Operations

SAFETY CAP AIRCRAFT ACCIDENT RATE DOWN SHARPLY IN 1999

There is good news and bad news concerning last year's mishaps. The good news is that our aircraft accident rate is the lowest it's been in five years. Civil Air Patrol experienced 3 flight accidents while flying 128,000 hours in 1999. These statistics resulted in a rate of 2.34 accidents per 100,000 flight hours - substantially down from last year's rate of 4.76. This is even more impressive when compared to the 7.05 rate that general aviation logged last year. We even outperformed the USAF Aero Clubs, who came in with a 3.90 rate. Progress like this does not just happen. It's a result of a concerted effort at all levels toward a common goal of safe operations. Specifically, I think credit goes to greater involvement of our Flight Release Officers, efforts of our operations officers to ensure mission-ready pilots and commanders who set high standards. While we should be proud of our successes, we need to remember that we lost two of our Oregon pilots last June during a mountain-flying clinic. In addition to the two lives lost, CAP destroyed a C-182 and substantially damaged two gliders. Needless to say, we can't relax our mishap prevention efforts - there's always room for improvement. Three trends identified in the aircraft mishap arena that caused us problems were moving aircraft out of and into hangars, a lack of landing proficiency and taxiing into obstructions. These trends show up every year! We all need to focus on the role of complacency in allowing our aircraft to strike objects on the ground, as well as the financial and readiness burdens that result. Landing proficiency can be improved by flying on a regular basis and occasionally taking a Certified Flight Instructor (CFI) with you. Participation in the FAA Pilot Proficiency Award Program (commonly referred to as the Wings Program) is a very effective way to keep your flying skills at their peak.

Vehicle mishaps showed a slight increase last year - nine in all - up from last year's seven. Trends were identified in hydroplaning and collisions with stationary obstructions. Emphasis should be placed on hydroplaning awareness and prevention techniques. Do you know how to calculate the optimum hydroplaning speed for your vehicle? You simply calculate nine times the square root of your tire pressure. For example, if your tire pressure is 32 pounds per square inch (psi), then the square root is 5.65. Multiply 5.65 times 9 and you get 50.85. Thus, when you drive through water of any significant depth on a roadway at speeds above 50 mph, you can expect your tires to plane on top of the water and momentarily lose contact with the road surface. If you're thinking that this phenomenon called hydroplaning could cause a loss of control - you're right! Most of the vehicles that had collisions with obstructions were long CAP vans that were negotiating turns. The cause of most of these mishaps is the driver not taking the turning characteristics of a long vehicle into account. Think of how an 18-wheeler must make a 90 degree turn. They usually must swing very wide to keep the rear wheels from hopping the curb. The same principal, but to a lesser degree, applies to CAP vans. The side mirrors can help you monitor the clearance throughout the turn. Keep these techniques in mind the next time you're driving a CAP van.

I'm alarmed at the increase in bodily injury mishaps - twice as many as the previous year. A new trend of heat-related illness was evident during the past year - a total of nine events, most of which occurred at Blue Beret last year during a rare heat wave at

Do you have any comments or suggestions for the *Ops Brief*? Feel free to send them to us via mail, e-mail, or fax. Current and back issues of the *Ops Brief* are also available via the FaxBack or WWW.

HQ CAP/DO
ATTN: *Ops Brief Editor*
105 S. Hansell Street
Maxwell AFB AL 36112

EMAIL: opsbrief@capnhq.gov
FAX: (334) 953-6342
FAXBACK: (334) 953-2599
WWW: http://www.capnhq.gov

Oshkosh. The traditional falls, fractures and lacerations represented the remaining trends. The most alarming fact in this category is that nearly three quarters of these mishaps involved cadets.

Let's make 2000 a banner year for Civil Air Patrol safety. I'd like to personally thank every safety advocate within CAP. You made a difference! Don't let up. We can continue to make even more of a difference by focusing attention on the following emphasis items:

- Movement of aircraft out of and into hangars.
- Landing proficiency.
- Obstruction avoidance during taxi operations
- Hydroplaning awareness / prevention
- Turning characteristics of long vans
- Heat-related illness prevention / treatment
- Cadet supervision

Y'all be careful out there.

CAP Mishap History

	1996	1997	1998	1999
A/C Accidents	**9**	**5**	**6**	**3**
Rate/100,000 hrs.	**7.79**	**4.16**	**4.76**	**2.34**
A/C Flight Incidents	**28**	**27**	**19**	**12**
A/C Ground Incidents	**7**	**8**	**3**	**6**
Fatalities	**7**	**2**	**3**	**2**
Vehicle Mishaps	**14**	**12**	**7**	**9**
Bodily Injury Mishaps	**13**	**14**	**13**	**28**
Serious Injury	**0**	**7**	**5**	**9**

DRUG DEMAND REDUCTION

CAP NEWS ARTICLE

Our Drug Demand Reduction (DDR) program that will be discussed in a future article in the CAP News is waging the battle against the demand for drugs. Recently, at the annual National Guard Counterdrug Conference, Col John C. Mosbey, who is Chief of Counterdrug Programs at the National Guard Bureau in Washington DC, stated that DDR is equally, or even more, important to a successful drug battle and that "Supply reduction by itself cannot win the battle."

FIRST THREE VOLUMES OF MSI AVAILABLE

The first three volumes of the Middle School Initiative (MSI) are available. The Admin Guide, CAP 1 and CAP 2 are presently found on the DDR web page within the NHQ homepage (go to the homepage and click on emergency services and look for the DDR button to the left). The Admin Guide is a detailed text designed to assist any unit get organized in all daily operations with detailed instructions. CAP 1 includes Achievements 1 and 2, and classes to earn the 101t and form 76. CAP 2 includes Achievements 3-5. Each volume contains a training schedule and complete lesson plans. CAP 3 (Achievements 6-8) has been printed and will be converted for the web page soon and CAP 4 (Achievements 9-11) is presently under contract. While designed for MSI, this program is easily transferred to everyday squadron use.

EMERGENCY SERVICES

ES CURRICULUM PROJECT

The phase one materials developed by the working group and tested by many of you will be released for general use in July of 2000. The curriculum being developed in phase two of the project for the mission base staff personnel will be released for testing soon thereafter. Units testing the curriculum in phase one will remain listed as test units unless they specifically request to be removed. If your unit is interested in being a part of the curriculum test, contact the project coordinator, John Desmarais, at National Headquarters. Please be sure to coordinate your request for involvement with the wing staff (command, operations, and emergency services) since training and qualification of emergency services personnel is their responsibility. John can be reached via phone at (334) 953-4228 during duty hours, or anytime via fax or e-mail, (334) 953-4242 and jdesmarais@capnhq.gov respectively. For additional information on the curriculum project you can also check out the project web page at http://www.capnhq.gov/nhq/do/dop/escp1.htm. The web page has several items of interest like a current listing of working group representatives, scheduled Train-The-Trainer Courses, and the project summary and timeline.

As we move into the last development phase of the project, we need for personnel with suggestions or curriculum already developed for mission aircrew training to forward it to us as soon as possible. Feel free to send it to John Desmarais or your region representatives.

NATIONAL SAR SCHOOL

The Inland SAR Planner Course is an excellent opportunity to greatly enhance one's SAR mission management skills. The course is designed for approximately 24 people with six slots for CAP members. This is not a walk-in class. HQ CAP/DO coordinates the six CAP slots, and the other positions are filled with state and local people. Primary CAP attendees should be mission coordinators and mission coordinators-in-training. Members with other ES qualifications fill-in as slots are available. Pilots are needed to provide the airpower perspective. The more ES experience a member has, the better the chance of being selected to attend the class. It is very important to **look way ahead and make application early**. We have to submit names of attendees to the SAR School 45 days in advance. When you are committed to attend, submit a CAPF 17 through channels, but also send us a copy by fax (334-953-6342) or notify us by e-mail at dos@capnhq.gov with name, address, and phone numbers. The following courses have openings.

Dates	Location	Application Deadline
13-17 November 2000	Florida - Tavares	12 Sep 00
11-15 December 2000	California	12 Oct 00
8-12 January 2001	Oklahoma, Oklahoma City	8 Nov 00
29 Jaunary - 2 February 2001	Washington - Camp Murray	29 Nov 00
20-24 February 2001	Denver, Colorado	22 Dec 00
12-16 March 2001	Salem, Oregon	12 Jan 01
2-6 April 2001	Michigan - Sleeping Bear Dunes National Park	1 Feb 01
29 April to 4 May 2001	Bangor, Maine	1 Mar 01
4-8 June 2001	Yorktown, Virginia - USCG Training Center	5 Apr 01
27-31 August 2001	Yorktown, Virginia - USCG Training Center	28 Jun 01

NATIONAL EMERGENCY SERVICES ACADEMY

Slots are still available in some of the National Emergency Services Academy Schools. Limited slots are currently available in the National Ground Search and Rescue School Basic Course, Mission Base Staff School Basic and Advanced Courses and the Mission Aircrew School Mission Pilot Track. Staff assistance is also still needed for the Mission Base Staff school and the Mission Aircrew School for qualified personnel. If you or someone you know is interested in participating, please submit a CAPF 31 as soon as possible. Applications can be faxed to (334) 953-4242/6342.

NATIONAL BOARD & CONFERENCE

We will be hosting many seminars and forums at the upcoming national board in San Antonio.

- As a pre-conference session on Thursday the 17th of August, a Train-The-Trainer Course will be conducted by members of the Emergency Services Curriculum Project's Working Group. Personnel interested in participating in this event must pre-register with the HQ CAP/DOS as slots are limited. If you or someone you know is interested, please send us the names, grade/ranks, and CAPSNs of interested personnel. This information can be faxed to us at (334) 953-4242/6342 or e-mailed to us at dos@capnhq.gov.
- A two-part session to prepare personnel to teach the Train-The-Trainer course will be conducted on Friday the 18th. Personnel interested in participating must be prior graduates of one of the ESCP Train-The-Trainer courses conducted over the last 18 months and must have permission of their wing commander to attend. For additional information contact Pete Kalisky or John Desmarais via phone at (334) 953-4225/4228 or via e-mail at dos@capnhq.gov.
- An update on CAP's Critical Incident Stress Management program will be conducted in conjunction with the HQ CAP-USAF Chaplain's Office for anyone interested.
- A presentation on alternative methods for missing aircraft search planning in CONUS will be provided by HQ CAP/DOSP based on research of AFRCC missions conducted in 1999.
- A general update on current Emergency Services issues like new regulations, curriculum available, and support to AFRCC and AFNSEP will be provided to all who are interested.

CAP NATIONAL OPERATIONS CENTER

The CAP National Operations Center staff is here to support you. For many of CAP's national missions, HQ CAP/DO or his representative must be in the loop. Additionally, we can often assist in coordinating support for major missions that you might have. As the summer tends to be one of our highest operational periods, feel free to call on us to help. If there is a serious operational problem that we can assist you with or that you must contact the DO shop about, please call us at 1-888-211-1812 (Emergencies Only).

NEW CAP REGULATIONS IN THE WORKS

A new CAPR 60-2 is out. Several new regulations are currently being coordinated. CAPR 60-3, combines CAPR 50-15 and CAPR 55-1 into one governing publication. CAPF 60-4 will provide completed and clean samples of the Emergency Services forms, including ICS forms. CAPR 60-5 is the governing publication on Critical Incident Stress Management and Teams development for CAP. CAPR 60-1 is under review.

STAN-EVAL

NEW CADET PRE-SOLO QUALIFICATION

Recent Headquarters inquiries indicate there may be a lack of understanding concerning the Pre-solo qualification and badge. If one reads CAPR 60-1 paragraph 3-2.a. it is apparent that the Pre-solo qualification and the badge that signifies the attainment of that qualification is a legitimate qualification with an accompanying badge. The CAP Pre-solo qualification is not an automatic rating that one receives for attendance at a wing or higher-level flight academy. The qualification has to be earned. Similar to the solo qualification, it is the CAP instructor's responsibility to ensure the cadet meets the standards set forth in CAPR 60-1. These standards include all the requirements of FAR 61.87, even though this qualification is strictly a CAP qualification and has no FAA significance, allowing no FAA privilege. When the cadet has completed all the CAPR 60-1 requirements it is up to cadet's instructor to exercise his/her good judgement in recommending the cadet student for a "Pre-solo Qualification Flight" evaluation. CAPR 60-1, paragraph 1-6.n. defines this flight. The instructor administering the "Pre Solo Qualification Flight" evaluation has the authority and responsibility to ensure this legitimate qualification is earned. The Pre-solo qualification provides a measure of success that is attainable during the flight academy by most hard working and motivated cadets. However, when administered properly it will not be earned by all.

COMMUNICATIONS

NEW VHF-FM RADIOS

New VHF-FM Radios were purchased in FY99 and are currently being shipped to the field. All the radios are capable of transmitting in the new "narrowband" mode, but will come programmed in the wideband mode to assure compatibility with older equipment. The new equipment will consist of aircraft radios, ground radios, and repeaters.

AIRCRAFT VHF-FM RADIOS

The aircraft upgrade to new VHF-FM equipment is currently under way. Wings installing the new VHF-FM radios need to coordinate with the wing Director of Communications (DC) to have the radios programmed prior to use. The programming software is available in the DC restricted area of the Comm web page at http://www.ntc.cap.gov/comm/.

GROUND VHF-FM RADIOS

The CAP Supply Depot is currently processing ground VHF-FM radios to be shipped to the wings. The radios, manufactured by Tait, will be processed and shipped starting in April. All radios should be shipped by the end of June. Each wing will also be provided with the programming software necessary to program additional channels into the radios.

VHF-FM REPEATERS

New Motorola Quantar repeaters are being shipped to each wing (1 per wing) over the next few months. The radio will arrive pre-programmed for the intended site. This is a replacement program, so the wing must turn in a corporate owned repeater currently on their inventory.

COUNTERDRUG

CAPF 83

Submission requirements have changed. Remember, when submitting the CAP Form 83, you must also submit a cover letter with each applicant's name, SSAN, and date of birth. The most current form is dated August 99 and must be submitted on a single sheet of paper. The USCS will not accept two page applications. Please avoid duplicate submissions. Before you send in the forms, check the most current CD report for members already approved.

NEW MISSION

The El Paso Intelligence Center (EPIC) has identified a requirement for digital photographs of clandestine landing sites within 20 miles of the southern U. S. border. CAP will fly missions from the Arizona – California border to Key West Fl. All photographs will be supplied using the standard upload procedures set up under the JTF6 Airfield Photo Mission. Mission numbers will be assigned by EPIC through your respective Region CDD. Contact HQ CAP/DOC, doc@capnhq.gov or 334-953-2452 with any questions.

SATELLITES TO IGNORE SIGNAL: CAP emergency locator transmitters (ELT) hunters are all too aware of the numerous non-distress signals generated by 121.5 MHz ELTs. There are so many in fact that the SAR system is expending inordinate amounts of effort and dollars to deal with these non-distress signals. The National Oceanic and Atmospheric Administration presented a briefing to the CAP National Board, Feb 2000, on discontinuing satellite monitoring of the 121.5 MHz distress signal in 2006.

NOAA seeks CAP assistance in getting out the message about the advantages of the 406 system and to notify users about the future phase-out of satellite monitoring of the 121.5 MHz distress signal.

COMPARISON OF THE 406 MHz AND 121.5 MHz DISTRESS BEACONS

406 MHz Beacons	121.5 MHz Beacons
Coverage: • Global	• Ground station dependent; ground stations nave an effective radius of about 1800 nm (2300 km). Both ground station and beacon must be in satellite footprint. Current coverage is about one -third of the world.
Reliability - False Alerts: • All alerts come from beacons. Satellite beacon transmissions are digital, coded signals. Satellites process only encoded data, other signals are rejected. • About 1 in 10 alerts are actual distress. • Beacon-unique coding/registration allow rapid incident corroboration. Registration mandatory 9/13/94. 90% beacons are registered. About 70% of false alerts are resolved by a phone or radio call to registration POCs prior to launching SAR assets.	• Only about 1 in 5 alerts come from beacons. Satellites cannot discern beacon signals from many non-beacon sources. Beacons transmit anonymously. • Fewer than 2 in 1000 alerts and 2 in 100 composite alerts are actual distress. • Since 121.5 MHz beacons transmit anonymously, the only way to ascertain the situation is to dispatch resources to investigate - a costly disadvantage.
Alerting: • First alert confidence sufficient to warrant launch of SAR assets. Earlier launches put assets on scene earlier - Average 2.5 hrs saved in maritime, 6 hrs in inland. • Average initial detection/alerting by orbiting satellites is about 45 minutes - worst case 60 minutes. • Average subsequent satellite passes every 60 minutes. • Vessel/acft ID, point of contact information provided with alerts allows rapid corroboration or stand-down. • Allows false alert follow-up to continuously improve system integrity/reliability. • Near instantaneous detection by geostationary satellites. System provides worldwide coverage.	• High false alert rate makes first-alert launch unfeasible. Absent independent distress corroboration, RCCs must wait for additional alert information. • Same as 406 MHz. • Same as 406 MHz. • Alerts are anonymous. 121.5 MHz analog technology not capable of transmitting data. • No capability. • No capability.
Position Information: • 1-3 nm (2-5 km) accuracy on average. Position calculated by doppler shift analysis. • 100 yard accuracy with GPS equipped beacon. GPS position processed with initial alert. System infrastructure now available.	• 12-16 nm (15-20 km) accuracy on average. Position calculated by doppler shift analysis. • No capability.
Locating the Target: • Superior alert (non-GPS) position accuracy limits initial search area to about 12.5 sq. nm (20 sq. km). • GPS-equipped beacons reduce search area to a negligible area. • 121.5 MHz homing signal facilitates target location by radio detection finder equipped search units.	• Initial position uncertainty result in 450 sq. nm (700 sq. km) search area on average. • No GPS capability. • Same as 406 MHz
Power Output: • 5.0 Watts	• 0.1 Watt
Cost: • Average cost is $750.00 - $1200.00 (EPIRB) • Average cost is $1800.00 (GPS equipped EPRIB) • Average cost is $2200.00 - $3500.00 (ELT)	• Average cost is $200.00 - $500.00 (EPRIB) • Average cost is $600.00 - $1500.00 (ELT)

Source: USCG